1893MNRAS..53R.444R

Lord Rosse in his *Observations of Nebulæ and Clusters of Stars*, p. 52, describes the cluster as magnificent, in a rich field, and he estimated 300 stars in the Finder-field of 26 minutes of arc, many of which are not below 11th mag.

On the photograph, now presented, I counted 620 stars in the cluster, within a circle of 26 minutes of arc, in diameter, many of which have close faint apparent *comites*, and some are triple stars. The stars in the region around the cluster are numerous and mostly faint.

The cluster ♅ VI. 17, *General Catalogue*, No. 1351, is shown on the photograph at 1m. 24s. R.A. and 0°·14′·5 Decl. s.p. the cluster M. 35. It is described by Sir J. Herschel as pretty small; much compressed; very rich; irregular triangle of stars extremely small, which description agrees well with the photograph.

Photograph of the Cluster M. 36 Aurigæ.

By Isaac Roberts, D.Sc., F.R.S.

The photograph of the cluster M. 36 *Aurigæ*, R.A. 5^{h} 27^{m}, Decl. 34°·6′ north was taken on the 8th February, 1893, with exposure of the plate during 90 minutes. It is No. 1166 in the *General Catalogue*, and is described by Sir J. Herschel as bright, very large; very rich; little compressed; stars 9th to 11th mag. and scattered.

Lord Rosse in his *Observations of Nebulæ and Clusters of Stars*, p. 48, describes it as a coarse cluster of large stars; fine double star in it.

The photograph now presented and enlarged to the scale of 24 seconds of arc to one millimetre agrees generally with the descriptions cited, but there are some stars in the cluster apparently double, and triple; there is also at least one multiple star. There is no nebulosity in the cluster, and the stars are shown to about the 16th mag. This region of the sky is richly covered with stars which by their configurations will in the future afford the astronomer an important field for correlation and study by aid of photographic methods.

Photograph of the Cluster M. 37 Aurigæ.

By Isaac Roberts, D.Sc., F.R.S.

The photograph of the cluster M. 37 *Aurigæ*, R.A. 5^{h} 45^{m}. Decl. 32°·31′ north was taken on the 8th February, 1893, with exposure of the plate during 90 minutes. It is No. 1295 in the *General Catalogue*, and is described by Sir J. Herschel as rich; pretty compressed in the middle; stars large and small.

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Lord Rosse in his *Observations of Nebulæ and Clusters of Stars* calls attention to wonderful loops and curved lines of stars.

By the photograph now presented and enlarged to the scale of 24 seconds of arc to one millimetre, the descriptions cited are confirmed, and some of the stars in the cluster appear to be double, triple, and multiple, and the region around is much crowded with stars, each one of which is now shown, to a scale, in true relative position and magnitude down to about the 16th. The configurations of the stars are, in the words of Lord Rosse, wonderful.

Photograph of the Cluster M. 50 *Monocerotis.*

By Isaac Roberts, D.Sc., F.R.S.

The photograph of the cluster M. 50 *Monocerotis*, R.A. $6^h\ 58^m$, Decl. 8°·11′ south was taken on the 10th March, 1893, with exposure of the plate during 90 minutes. It is No. 1483 in the *General Catalogue*, and is described by Sir J. Herschel as a remarkable cluster; very large; rich; pretty compressed; elongated; stars 12th to 16th mag.

Lord Rosse in his *Observations of Nebulæ and Clusters of Stars*, p. 55, 1852 to 1876, describes it as a coarse cluster; very large; straggling; irregularly round; spiral arrangement; extending about 15′ n. s. and 10′ p. f.; stars 12th to 15th mag.

The photograph shows the stars to be generally brighter and less numerous than those in the clusters M. 35 *Geminorum* and M. 36 and 37 *Aurigæ*, but it presents the same characteristics of apparent *comites* and double stars as those clusters. The photograph does not suggest the spiral arrangement referred to by Lord Rosse, and the stars are shown to about 16th mag.

Negatives of Jupiter, made with the Great Telescope of the Lick Observatory during the Opposition of 1892–3. By Edward S. Holden, W. W. Campbell, and A. L. Colton.

We have the honour to present to the Royal Astronomical Society, in the name of the Lick Observatory, a series of negatives of *Jupiter*, made with the great telescope during the opposition of 1892–3, in continuation of similar work. The following memoranda should accompany them:—

The negatives were all made on specially fast plates, prepared for us by the Cramer Company, 8 × 10 inches in size. There are usually nine images of the planet on each plate. The enlargements were directly made in the telescope, using the full aperture of 33 inches, by means of a capital amplifying lens made for the Observatory at the cost of the Smithsonian Institution, by Mr. Brashear, from calculations by Professor

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